Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of the claims:

1. (Currently amended) An illumination system for illuminating a scan region on an object, comprising:

a hollow reflector having an interior reflective surface and an exit aperture formed in a body of the hollow reflector;

a light source positioned within said hollow reflector and moving along a displacement path to illuminate a scan region of an object that is positioned on a platen, said light source producing a plurality of light rays, some of the light rays produced by said light source being reflected by the interior reflective surface of said hollow reflector before passing through the exit aperture;

a first reflector joined to ~~disposed on~~ a first side of the exit aperture of said hollow reflector; and

a second reflector joined to ~~disposed on~~ a second side of the exit aperture of said hollow reflector, said first and second reflectors being positioned in non-parallel, spaced-apart relation to one another, said first and second reflectors at least partially collimating light passing through the exit aperture of said hollow reflector to form a collimated beam, wherein the hollow reflector is formed to comprise both the interior reflective surface and the first and second reflectors.

2. (Currently amended) The illumination system of claim 1, wherein said hollow reflector has open ends that provide an inlet for air to enter interior regions of the hollow reflector ~~comprises a body having a generally cylindrically shaped interior wall that defines the interior reflective surface and wherein the exit aperture comprises a generally elongate axial opening in the interior wall of said body~~.

3. (Currently amended) The illumination system of claim 1, wherein the first and second reflectors comprise integral portions of the hollow reflector ~~interior reflective surface of said hollow reflector comprises a diffusing reflecting surface~~.

4. (Currently amended) The illumination system of claim 1, wherein the first and second reflectors form a sharp corner at a junction with the interior reflective surface of said hollow reflector, the sharp corner minimizes scattering and improves collimation of the light rays passing through the exit aperture ~~is coated with a diffusing reflecting material~~.

5. (Currently amended) The illumination system of claim 1, wherein the illumination system is mounted to a carriage that moves along the displacement path to illuminate the scan region on the object ~~said light source comprises a fluorescent lamp~~.

6. (Currently amended) The illumination system of claim 1, wherein said first reflector comprises a generally flat ~~planar~~ reflective surface.

7. (Currently amended) The illumination system of claim 1, wherein said second reflector comprises a generally flat ~~planar~~ reflective surface.

8. (Currently amended) The illumination system of claim 1, wherein said first and second reflectors comprise specular reflecting surfaces.

9. (Original) The illumination system of claim 1, wherein said first and second reflectors are coated with a specular reflecting material.

10. (Currently amended) An illumination system for illuminating a scan region on an object, comprising:

a body having an interior wall defining a generally cylindrically shaped interior reflective surface, the interior wall of said body also defining a generally elongate axial opening therein located at a first radial position on the interior wall of said body;

a light source illuminating a scan region on an object that is positioned on a platen and being positioned within the generally cylindrically shaped interior reflective surface defined by said body;

a first reflector joined to ~~disposed on~~ a first side of the elongate axial opening defined by the interior wall of said body; and

a second reflector joined to ~~disposed on~~ a second side of the elongate axial opening defined by the interior wall of said body, said first and second reflectors being positioned in non-parallel, spaced-apart relation to one another, said first and second reflectors at least partially collimating light passing through the exit aperture of said hollow reflector to form a collimated beam; and

wherein the first and second reflectors form a sharp corner at a junction with the interior reflective surface of the body, and the sharp corner minimizes scattering and improves collimation of the at least partially collimating light passing through the exit aperture.

11. (Currently amended) The illumination system of claim 10, wherein the first and second reflectors comprise integral portions of the body ~~said light source comprises a fluorescent lamp~~.

12. (Currently amended) The illumination system of claim 10, wherein said first reflector comprises a flat ~~generally planar~~ reflective surface.

13. (Currently amended) The illumination system of claim 10, wherein said second reflector comprises a flat ~~generally planar~~ reflective surface.

14. (Currently amended) The illumination system of claim 10, wherein a length of the body is co-extensive with a length of a scan line within the scan region ~~the interior reflective surface of said body comprises a diffusing reflecting surface~~.

15. (Currently amended) The illumination system of claim 10, wherein the body is formed to comprise both the interior reflective surface and the first and second reflectors ~~interior reflective surface of said body is coated with a diffusing reflecting material~~.

16. (Original) The illumination system of claim 10, wherein said first and second

reflectors comprise specular reflecting surfaces.

17. (Original) The illumination system of claim 10, wherein said first and second reflectors are coated with a specular reflecting material.

18. (Currently amended) An illumination system for illuminating a scan region on an object, comprising:

hollow reflector means for defining an interior reflecting surface and an exit aperture formed through a body of the hollow reflector means;

light source means positioned within said hollow reflector means for producing a plurality of light rays as the light source means moves along a displacement path to illuminate the scan region on the object; and

collimating reflector means joined to ~~disposed on~~ the exit aperture defined by said hollow reflector means for at least partially collimating light exiting the exit aperture defined by said hollow reflector means to form a collimated beam, wherein the hollow reflector means is integrally formed to comprise both the collimating reflector means and the interior reflecting surface~~; and~~

~~rounded transition means is provided between the interior reflecting surface of the hollow reflector means and the collimating reflector means for providing a diffusing reflective surface~~.

19. (Currently amended) The illumination system of claim 18, wherein said collimating reflector means forms a sharp corner at a junction with the interior reflecting surface of the hollow reflector means, and the sharp corner minimizes scattering and improves collimation of the at least partially collimating light exiting through the exit aperture ~~comprises first reflecting means and second reflecting means positioned in generally non-parallel, spaced-apart relation~~.

20. (Currently amended) A method for illuminating a scan region on an object, comprising:

providing a hollow reflector having an interior reflecting surface and an exit aperture formed in a body of the hollow reflector;

integrally forming the hollow reflector with ~~disposing~~ a collimating reflector on at least one side ~~surface~~ of the exit aperture of the hollow reflector and forming a junction between the collimating reflector and the interior reflecting surface; ~~and~~

directing a plurality of light rays onto the interior reflecting surface of the hollow reflector, the interior reflecting surface reflecting some of the light rays through the exit aperture in the hollow reflector, the collimating reflector at least partially collimating light exiting the exit aperture in the hollow reflector to form a collimated beam; and

moving the hollow reflector along a displacement path to direct light exiting through the aperture to scan an object that is positioned on a transparent platen.